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ARNOLD SOMMERFELD
CENTER FOR THEORETICAL PHYSICS



Arnold Sommerfeld Lecture Series

Professor Andrew Millis

**Columbia University
and
the Simons Foundation, USA**

Theory Colloquium:

**Meeting Dirac's Challenge: modern approaches
to the Correlated Electron Problem**

This talk will present an overview of recent progress towards a solution of one of the grand-challenges of modern science: understanding the properties of interacting electrons in molecules and solids. After an introduction to the physics I will argue our theoretical understanding of a basic model system, the two dimensional Hubbard model, has reached the level that we can say with confidence that its superconducting properties capture key aspect of the high-T_c superconductivity in copper-oxide materials. I will then summarize the current status of our extension of the methods to fully physically realistic systems, emphasizing the areas of theoretical uncertainty and the prospects for resolution.

Wednesday, May 10, 2017, 16:15 h, Room A 348, Theresienstr. 37, LMU

Prof. U. Schollwöck
Prof. J. v. Delft